

COMMUNICATION

COMMUNITY HEALTH SCIENCE

CMS

- 512\*.** **Biostatistics and Epidemiology**  
*Summer. 2(3-0)*  
*R: Open only to graduate and graduate-professional students in the Colleges of Osteopathic Medicine, Human Medicine, and Nursing or approval of department.*  
 Medical literature to illustrate statistical reasoning and research design. Emphasis on analysis rather than computation. Prospective or retrospective studies. Sensitivity, specificity, and predictive values. Epidemiologic terminology.  
 QA: CMS 512
- 513\*.** **Health Law, Health Policy, and Health Care**  
*Fall. 2(02-00)*  
*R: Open only to graduate and graduate-professional students in the Colleges of Osteopathic Medicine, Human Medicine, and Nursing or approval of department.*  
 Legal processes related to health care systems. Law suits, malpractice, statutory and case law. Insurance and tax considerations. Continuing field experiences and seminars in community medicine.  
 QA: CMS 513
- 515\*.** **Issues in Minority Health**  
*Fall, Spring, Summer. 3(03-00)*  
*R: Open only to graduate and graduate-professional students in the Colleges of Osteopathic Medicine, Human Medicine, and Nursing or approval of department.*  
 Patterns of health and illness in minority populations.
- 521\*.** **Evaluation of Health Services**  
*Spring. 3(03-00)*  
*R: Approval of department.*  
 Experimental and quasi-experimental designs. Cost benefit and efficiency models. Assessment of health services delivery.  
 QA: CMS 521
- 522\*.** **Principles of Gerontology for Medical Practice**  
*Spring. 3(03-00)*  
*R: Open only to graduate-professional students in the Colleges of Osteopathic and Human Medicine or approval of department.*  
 Lectures, readings, tapes, small group seminars, and home visits related to normal aging epidemiology. Major chronic diseases and other issues of geriatric care.  
 QA: CMS 522
- 590\*.** **Special Problems in Community Medicine**  
*Fall, Spring, Summer. 1 to 8 credits.*  
*R: Approval of department; application required.*  
 Each student works under faculty direction on an experimental, theoretical, or applied problem.  
 QA: CMS 590
- 600\*.** **Preventive Medicine and Public Health Clerkship**  
*Fall, Spring, Summer. 2 to 12 credits in increments of 2 credits.*  
*R: Open only to colleges of Human Medicine and Osteopathic Medicine students with successful completion of two years of medical school; approval of department.*  
 Clinical and community experiences in personal and community health services, environmental health, and other health and medical programs which meet health needs of various population groups.  
 QA: CMS 600

- 605\*.** **Occupational Health Clerkship**  
*Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits.*  
*R: Open only to colleges of Human Medicine and Osteopathic Medicine students with successful completion of two years of medical school; approval of department.*  
 Industrial setting delivery of medical care to workers. Treatment of industrial accident injuries. Review of safety and preventive medicine programs.  
 QA: CMS 605
- 610\*.** **Primary Care Geriatrics Clerkship**  
*Fall, Spring, Summer. 6 to 12 credits in increments of 6 credits.*  
*R: Open only to colleges of Human Medicine and Osteopathic Medicine students with successful completion of two years of medical school; approval of department.*  
 Clinical and community experiences including taking patient's history, assessment, development and use of management and care plan, and use of community resources for the long-term care of the aged.  
 QA: CMS 610
- 618\*.** **Clinical Tropical Medicine**  
*Fall. 2 to 4 credits in increments of 2 credits.*  
*R: Approval of department.*  
 Selected topics such as African AIDS, malaria, onchocerciasis, tuberculosis, and schistosomiasis. Pathophysiology, treatments, epidemiology, current research, and controversies.  
 QA: CMS 618
- 620\*.** **Directed Studies in Community Medicine**  
*Fall, Spring, Summer. 1 to 6 credits.*  
*May reenroll for a maximum of 24 credits.*  
*R: Approval of department.*  
 Individual projects on special problems related to community medicine.  
 QA: CMS 620
- 621\*.** **Clinical Tropical Medicine Clerkship**  
*Spring. 8 to 16 credits in increments of 8 credits.*  
*P: CMS 618. R: Open only to graduate-professional students in the colleges of Osteopathic and Human Medicine in final year.*  
 Supervised clinical experiences in a large African teaching hospital and its outpatient clinics; students must spend at least six weeks on site. Small group discussions led by MSU faculty.

COMPUTER SCIENCE CPS

- 131.** **Introduction to Technical Computing**  
*Fall, Spring. 3(2-2)*  
*P: MTH 132 or concurrently.*  
 Computing systems and applications. Design and implementation of programs using FORTRAN. Examples from engineering, mathematics and science.  
 QP: MTH 109 ORMTH 111 QA: CPS 112
- 230.** **Algorithms and Computing**  
*Fall, Spring. 4(3-2)*  
*P: MTH 132.*  
 Computer systems and problem solving. Software development. Structured design and implementation of algorithms. Procedural and object-oriented programming. Compilation and linking.  
 QP: MTH 112 QA: CPS 251 CPS 252
- 260.** **Discrete Structures in Computer Science**  
*Fall, Spring. 3(3-0)*  
*P: MTH 133.*  
 Propositional and first order logic. Equivalence, inference. Mathematical induction, diagonalization principle. Set operations, relations, functions. Lattices, Boolean algebras. Truth tables and minimization of Boolean expressions. Applications to CPS.  
 QP: MTH 214 CPS 252 QA: CPS 321
- 290\*.** **Independent Study in Computer Science**  
*Fall, Spring. 1(-) May reenroll for a maximum of 3 credits.*  
*R: Approval of department; application required.*  
 Supervised individual study in an area of computer science.  
 QA: CPS 295
- 291\*.** **Selected Topics in Computer Science**  
*Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 8 credits.*  
*R: Approval of department.*  
 Topics selected to supplement and enrich existing courses and lead to the development of new courses.  
 QA: CPS 292
- 320.** **Computer Organization and Assembly Language Programming**  
*Fall, Spring. 4(3-2)*  
*P: CPS 230. R: Not open to students with credit in EE 331.*  
 Machine representation of data and instructions. Machine organization, primary storage, registers, arithmetic logic unit, control unit, operations. Assembly language programming, interface to high level languages. Assemblers and loaders.  
 QP: CPS 252 MTH 214 QA: CPS 311
- 330.** **Data Structures and Programming Concepts**  
*Fall, Spring. 4(3-2)*  
*P: CPS 230, CPS 260. R: Open only to Computer Science, Computer Engineering, Computational Mathematics, Electrical Engineering, and LBS Computer Science students.*  
 Data types and structures. Algorithms including searching, sorting and hashing. Program correctness, program analysis. Abstract data types including stacks, queues, and trees. Object-oriented programming, introduction to various program libraries.  
 QP: CPS 311 CPS 252CPS 321 QA: CPS 333
- 100.** **Using Computers**  
*Fall, Spring, Summer. 3(2-2)*  
*R: Freshmen and sophomores only. Not open to students in the College of Engineering and the College of Natural Science.*  
 Applications of computation. Computer hardware, software, communication and networks. Impact of computation and computers on the individual and society. Hands-on application exercises. Databases, files, systems, graphics, spreadsheets, wordprocessing.  
 QA: CPS 100
- 130.** **Introduction to Computing**  
*Fall, Spring, Summer. 3(2-2)*  
*R: Freshmen and sophomores only.*  
 Computer Aided Software Engineering for design. Structured, modular BASIC for programming. Selection, loops, arrays, sequential and direct files, character and pixel graphics, and spreadsheets. Applications from business, science and humanities.  
 QA: CPS 115